

### ABSTRACT

A steering angle sensor detects a rotational angle of a steering system whose steering is assisted by driving of an electric motor via a reduction mechanism so as to calculate a steering angle of a steering wheel. The steering angle sensor has: a sensor wheel operating simultaneously with rotation of a steering shaft; and an absolute angle calculating means for calculating an absolute steering angle based on a steering angle signal from the sensor wheel. The sensor wheel has a GMR element and a magnetizing portion which is arranged around the GMR element, and the rotational angle is detected with two turns of the steering shaft being one cycle based on a change in resistance value of the GMR element obtained by changing a magnetic field direction according to rotation of the magnetizing portion.